

**IN THE CLAIMS:**

1-6. (Canceled)

7. (Currently Amended) ~~A magnetic disk device according to claim 2, \*~~A  
magnetic disk device comprising:

- a magnetic disk for storing information;
- a spindle motor for driving said magnetic disk to rotate;
- a magnetic record head for recording information on said magnetic disk;
- a magnetic reproduce head for reproducing information from said magnetic  
disk;
- an actuator having a suspension for supporting said magnetic heads to be  
movable on said magnetic disk and drive means for driving said suspension;
- a loading/unloading path for loading/unloading said magnetic record head and  
said magnetic reproduce head onto/from said magnetic disk; and
- a stopper for limiting the movable range of said actuator, wherein a recording  
region detecting signal is written on said magnetic disk just when said magnetic  
heads are loaded on said magnetic disk that has no positioning signal recorded for  
positioning said magnetic heads, and a track region on said magnetic disk is  
determined on the basis of the position at which said recording region detecting  
signal has been written;

wherein a propagation-purpose pattern is sequentially recorded on said  
magnetic disk from a stop position at which said magnetic heads are stopped by said

stopper in the radius direction, and when said recording region detecting signal is detected, the detected position is determined to be one end of said track region.

8. (Currently Amended) ~~A magnetic disk device according to claim 2,~~ A magnetic disk device comprising:

a magnetic disk for storing information;

a spindle motor for driving said magnetic disk to rotate;

a magnetic record head for recording information on said magnetic disk;

a magnetic reproduce head for reproducing information from said magnetic disk;

an actuator having a suspension for supporting said magnetic heads to be movable on said magnetic disk and drive means for driving said suspension;

a loading/unloading path for loading/unloading said magnetic record head and said magnetic reproduce head onto/from said magnetic disk; and

a stopper for limiting the movable range of said actuator, wherein a recording region detecting signal is written on said magnetic disk just when said magnetic heads are loaded on said magnetic disk that has no positioning signal recorded for positioning said magnetic heads, and a track region on said magnetic disk is determined on the basis of the position at which said recording region detecting signal has been written;

wherein a head feeding pitch at which a product-purpose servo signal is recorded is calculated from the number of times that said magnetic head is fed for recording a propagation-purpose pattern to move from a stop position at which said

magnetic head is stopped by said stopper to a position at which said recording region detecting signal is detected, and a designed number of tracks.

9. (Previously Presented) A magnetic disk device according to claim 8, further having a pattern according to said head feeding pitch at which said head is fed to record said product-purpose servo signal, and said propagation-purpose pattern formed at a head feeding pitch according to the size of said magnetic record head.

10. (New) A servo-write method comprising:

starting a spindle and setting to a predetermined rotational speed;

writing a recording region detecting signal on a magnetic disk on which no positional signal is recorded, by turning on a write current during a predetermined period when a magnetic head is moved from a load/unload path onto an area on a first periphery of said magnetic disk;

moving said magnetic head to a opposite periphery of said magnetic disk from said first periphery, until an actuator hits a stopper defining said opposite periphery of said magnetic disk;

recording a propagation-purpose pattern which is used to determine a magnetic head position when a servo signal is recorded later in a radial direction, by moving said magnetic head at a predetermined feed pitch until said recording region detecting signal is detected, said feed pitch being determined so as to correspond to

a predetermined rate of level of said propagation-purpose pattern detected just after the propagation-purpose pattern is written by said magnetic head;

calculating a pitch of head feeding for writing a product-purpose servo signal by which said magnetic head can be located at a certain track in order to write/read information, on a basis of amounts of head feeding from said opposite periphery to a point where said recording region detecting signal is recorded and a number of tracks; and

recording said product-purpose servo signal sequentially onto a predetermined area between a position of said opposite periphery of said magnetic disk and a position at which said recording region detecting signal is recorded.

11. (New) The servo-write method according to claim 10, wherein said recording region detecting signal is recorded on said magnetic disk between said load/unload path and a recorded said product-purpose servo signal.

12. (New) The servo-write method according to claim 10, wherein said writing a recording region detecting signal comprises operations of calculating said predetermined period on a basis of distance of movement and a movement speed of said magnetic head.

13. (New) The servo-write method according to claim 10, wherein said first periphery is an outer periphery of said magnetic disk, said load/unload path is a

load/unload ramp located at said outer periphery of said magnetic disk, and said opposite periphery is an inner periphery of said magnetic disk.

14. (New) The servo-write method according to claim 10, comprising defining a track region to be an interval between said position at which said recording region detecting signal has been written, and a position at which said magnetic heads are stopped by said stopper.

15. (New) A magnetic disk device comprising:

a magnetic disk for storing information;

a spindle motor for driving said magnetic disk to rotate;

a magnetic read/write head; and

a servo-write unit to:

write a recording region detecting signal on the magnetic disk on which no positional signal is recorded, by turning on a write current during a predetermined period when the magnetic head is moved from a load/unload path onto an area on a first periphery of said magnetic disk;

move said magnetic head to a opposite periphery of said magnetic disk from said first periphery, until an actuator hits a stopper defining said opposite periphery of said magnetic disk;

record a propagation-purpose pattern which is used to determine a magnetic head position when a servo signal is recorded

later in a radial direction, by moving said magnetic head at a predetermined feed pitch until said recording region detecting signal is detected, said feed pitch being determined so as to correspond to a predetermined rate of level of said propagation-purpose pattern detected just after the propagation-purpose pattern is written by said magnetic head;

calculate a pitch of head feeding for writing a product-purpose servo signal by which said magnetic head can be located at a certain track in order to write/read information, on a basis of amounts of head feeding from said opposite periphery to a point where said recording region detecting signal is recorded and a number of tracks; and

record said product-purpose servo signal sequentially onto a predetermined area between a position of said opposite periphery of said magnetic disk and a position at which said recording region detecting signal is recorded.

16. (New) A magnetic disk device according to claim 15, wherein said recording region detecting signal is recorded on said magnetic disk between said load/unload path and a recorded said product-purpose servo signal.

17. (New) A magnetic disk device according to claim 15, wherein said write of a recording region detecting signal comprises operations of calculating said

predetermined period on a basis of distance of movement and a movement speed of said magnetic head.

18. (New) A magnetic disk device according to claim 15, wherein said first periphery is an outer periphery of said magnetic disk, said load/unload path is a load/unload ramp located at said outer periphery of said magnetic disk, and said opposite periphery is an inner periphery of said magnetic disk.

19. (New) A magnetic disk device according to claim 15, comprising defining a track region to be an interval between said position at which said recording region detecting signal has been written, and a position at which said magnetic heads are stopped by said stopper.